Title: Interrelationships between Vitamin B12 and folic **acid** in myelomatosis: **cobalamin** coenzyme and **tetrahydrofolic acid** function.

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Source: Scand J Haematol 1978 Apr;20(4):360-70

Abstract: **Cobalamin** and folate metabolism was investigated in 43 patients with myelomatosis, in 8 control subjects of similar age and 22 younger controls. Plasma total **cobalamin** was lower in myeloma patients than in either of the control groups and methylcobalamin (Me-Cbl) was disproportionately reduced. Erythrocyte levels of total **cobalamin** were very similar in patients and elderly controls but were half the levels in younger controls. Erythrocyte levels of Me-Cbl were slightly higher in patients than in the dlderly controls. FIGLU excretion after L-histidine was elevated in 53% of the patients but values did not correlate with serum or erythrocyte folate or with plasma total **cobalamin**. FIGLU excretion decreased after DL-methionine or Me-Cbl only in patients whose FIGLU excretion was initially high. The results are discussed in the light of the 'methylfolate trap hypothesis' and suggest that some patients with myelomatosis have insufficient activity of methionine synthetase to meet the additional metabolic demand for one carbon compounds

Major Indexes:

- Cobamides [blood]
- Multiple Myeloma [blood]
- Tetrahydrofolates [blood]
- Vitamin B 12 [blood]

Minor Indexes:

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- FIGLU Test
- Histidine [pharmacology]
- Methionine [pharmacology]
- Methylmalonic **Acid** [urine]
- Middle Age

Language: English
Periodical Type: JOURNAL ARTICLE